CHRYSSAFIDIS

arkon flow systems

Build your own flowmeter

| USB | RS232 | RS485 | TCP/IP | BLUETOOTH | WI-FI | GPRS | GSM-SMS | 4-20 mA CURRENT LOOP | PULSE | PULSE 230 |

90-250VAC POWER SUPPLY

24VDC POWER SUPPLY

12VDC POWER SUPPLY

MAG **X**2

Flow Measurement & Control Specialists

MAGX2 : Modular design suitable from most basic to most advanced applications

- The MAGX2 has an innovative modular design "Plug & Play"
- Accuracy ±0.2% of actual value
- Sizes from DN10 to DN1000
- Connection: DIN, ANSI, JIS, others on request
- Communication protocol: all communications via Modbus RTU
- Temperature sensor
- Graphic display with multi-language menu
- Intelligent sensor design: digital communication allows communication between the transmitter and the sensor for up to a 500 m range. Calibration data is stored in the sensor
- Wi-Fi, GPRS, TCP/IP, GSM-SMS and Bluetooth communication available
- Data-logging on a standard micro-SD card
- 6 buttons to operate
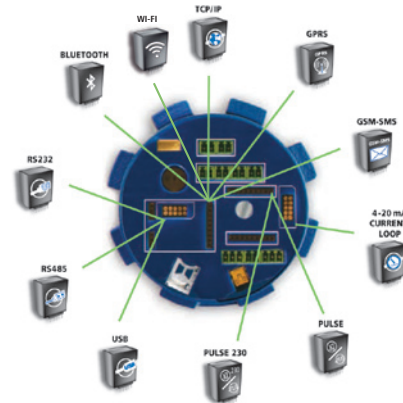
„Built in design" for upgrades

GPRS module

Control, monitor, set up your flowmeter from your office!

- Wireless communication system, which is performed by the GPRS network
- The measurement can be done anywhere in the world and read from your office
- No need to visit the site

APPLICATIONS

- Wireless control of, and communication between transmitter and the PC or PLC systems

GSM - SMS module

Getting data from the flowmeter to your mobile phone!

- Receives flow rate and total volume from MAGX2 by SMS in a specific intervals
- Specific interval of SMS transmissions can be set up through the MAGX2 software
- SMS is sent to a specific phone number or SMS server (up to 3 phone numbers)

MAGB1 : Battery powered flowmeter

- Suitable for irrigation, remote applications and any other application where power supply lines are difficult or expensive to instal
- Modbus RTU communication protocol via USB or RS485
- Data logger: 1820 records, selectable interval of logging (5min - 24h)
- Sizes from DN20 to DN250, others on request
- Connection: DIN, ANSI, JIS, others on request
- Accuracy ±0.5% of actual value
- Empty pipe detection
- Battery life up to 5 years (up to 15 years with external battery pack)
- Graphic display and touch button for operation and instant access to information

MAGS1 : Stand-alone flowmeter

- MAGS1 is a stand-alone version of flowmeter, which does not need a transmitter and can be operated on its own
- Suitable for applications where the flowmeter is connected to a PLC on RS485 Modbus RTU protocol
- Powered with 24VDC, has a standard RS485 line with Modbus RTU protocol as a unique output/communication
- Connection: DIN, ANSI, JIS, others on request
- Liner: Hard Rubber, PTFE, other materials on request
- Maximum nominal pressure: PN 40/300 psi

CHRYSSAFIDIS

CHRYSSAFIDIS

MAG X2

Applications

- **Water & Wastewater** - distribution networks, irrigation, sludge/sewage, water treatment, leakage management, desalination, marine, checking of pumps and water wells
- **Public utilities** - water supply system, sewage systems, wastewater, industrial water, sludge, human waste etc.
- **Petrochemical/chemicals** - corrosive liquids, chemicals, industrial water, waste water
- **Paper & Pulp** - low concentration of pulp, additives, bleaches, colorants, liquor
- **Construction** - building material slurry, sediment slurry, cement slurry, industrial water, etc.
- **Hygienic/Sanitary** - potable water metering, food & beverages, pharmaceutical, medium and high density fluids, blending, dosing, batching

Advantages

The MAGX2 has an innovative modular design "Plug & Play" and it is a fit-all, flexible, low-cost flow meter all at the same time. The transmitter consists of the low-cost basic unit plus optional modules according to the end-user's requirements. Each module is in fact a small electronic board, the size of a large stamp, which can be freely installed and removed from the main board in seconds.

> **You do not pay for options you do not want or need.**
> **You can build a flowmeter exactly as per your requirements.**
> **You can upgrade your flowmeter at anytime in the future.**

„Built in design" for upgrades

STANDARD

Transmitter
Power supply modules
(12VDC/24VDC/90-250VAC)
Sensor communication
module
CD + free Software
Sensor
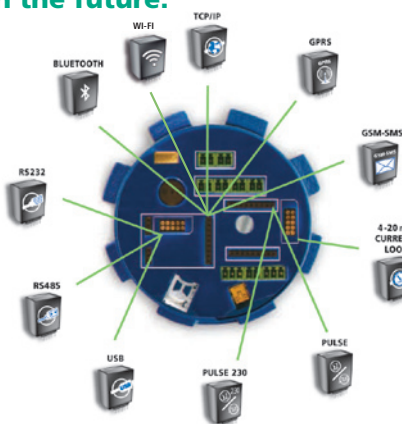
UPGRADES

Choose your communication
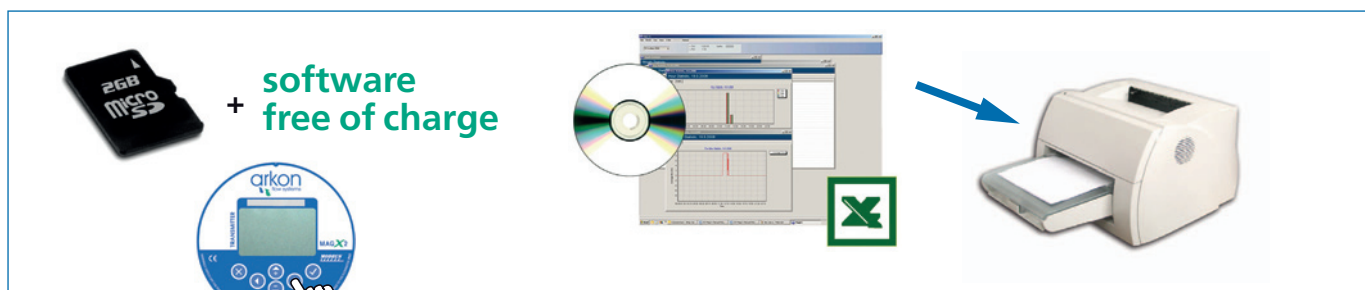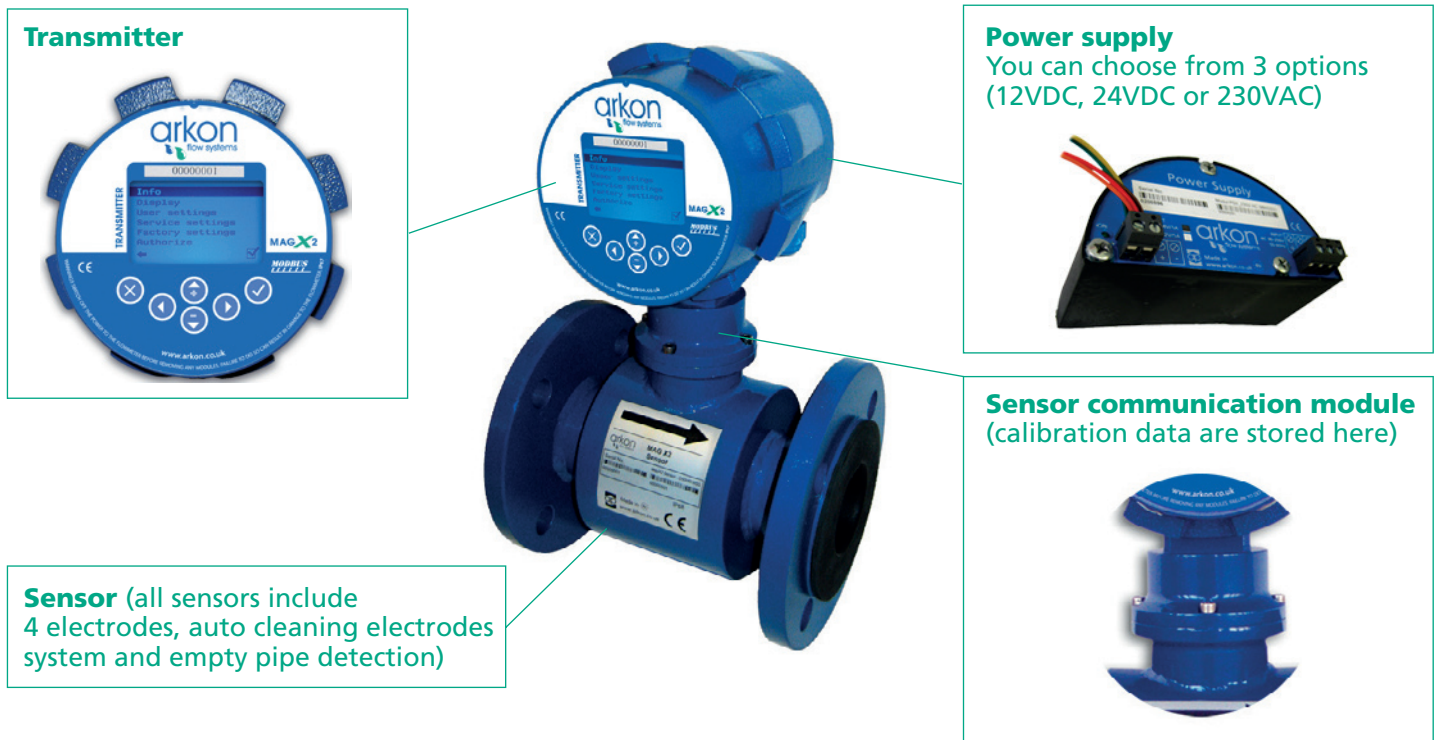Choose your outputs
Use SD card

Features

- **Accuracy** - ± 0.2% (0.5 - 10 m/s) of actual value
- **Temperature sensor** - to measure temperature of the measured medium
- **Communication protocol** - all communications via Modbus RTU
- **Autocleaning** - automatic electrodes cleaning
- **Unique design** - any upgrade, extra features inside of the flowmeter, extra protection - „Built in design"
- **Graphic display** - multi-language menu. Higher protection via lock-out system for buttons and 3 levels of passwords – User, Service, Factory settings.
- **Intelligent sensor design** - digital communication allows communication between the transmitter and the sensor up to 500 m. Calibration data are stored in the sensor communication module. If the transmitter is changed for whatever reason, all the calibration data will be taken from the sensor directly. No calibration download mistakes.

Data logger

The MAGX2 uses a standard micro SD card for data-logging purposes, a 2GB micro SD card could be ordered with the flowmeter and a higher capacity card could be inserted as an upgrade if required. It can be easily installed and ejected from the data socket. Data is stored in *.CSV format (compatible with Excel, Open Office & other programs). Record intervals are selectable from 1 minute to 24 hours.

software free of charge

CHRYSSAFIDIS

MAG X2

MAGX2 BASIC WORKING VERSION CONSISTS OF:

Transmitter

Power supply
You can choose from 3 options (12VDC, 24VDC or 230VAC)

Sensor communication module
(calibration data are stored here)

Sensor (all sensors include 4 electrodes, auto cleaning electrodes system and empty pipe detection)

That is basic configuration for a MAGX2 working unit. It only allows communication with the flowmeter via keypad and does not include any output or data-logging function. Flowrate and totalizer can be checked on the display only.

Arkon offers a wide range of optional modules which are not necessary for a working unit but can be added to the basic configuration to add extra features.

Currently the following optional modules are available:

🍃 Communication modules to allow communication via Modbus (except GSM-SMS - it has its own system using sms messages)

MODBUS

| WI-FI | GPRS | GSM-SMS | Bluetooth | TCP/IP | RS485 | RS232 | USB |

🍃 Arkon offers two output options: one 4-20 mA and two pulse output options. Both options can be used separately or combined. Out of the two pulse options only one pulse option could be used or installed at any given time.

🍃 Data-logging option
MAGX2 motherboard includes a real time clock. For data-logging you just need a standard micro SD memory card. We can supply it for you or you can buy it yourself locally.

**Current output 4-20mA** **Pulse output** **Pulse 230**

The most important advantage of Arkon's modular system is the flexibility for the customer to design his own solution for each application. Modular system also allows big savings by selecting and paying exactly for the required features on each application.

The MAGX2 flowmeter can be upgraded easily at any time by adding or exchanging modules.

5

Choose your communication

CHRYSSAFIDIS MAG **X**2

RS232 communication module

Standard for serial communication data transmission, commonly used for PLC and old PC.
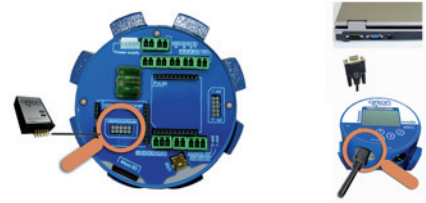
USB communication module

A standard for computer communication.

RS485 communication module

A standard for industrial communication, up to 32 devices on one line without repeaters. Termination resistor may be needed.
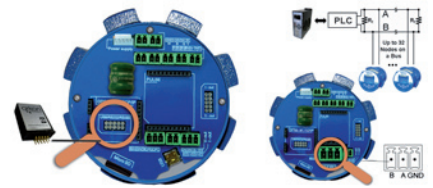
Bluetooth communication module

Cables are not required to check your flowmeter within a 200 m range.
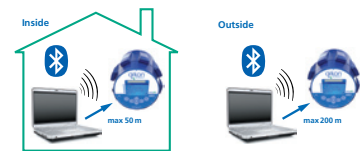
TCP/IP communication module

Ethernet communication with flowmeter within your local network or even through internet.
A MODBUS RTU over TCP/IP (serial) protocol is used.

GPRS communication module

Wireless communciation system which is performed by the GPRS network. The measurement can be evaluated from anywhere in the world. You will have your flowmeter under control.

GSM-SMS communication module

Getting data from your flowmeter to your mobile phone. The user can send SMS commands by a remote SMS server or phone.

Wi-Fi communication module

Easy communication between flowmeter, PC or PLC system with no data cables needed.

External sensors

External pressure and temperature sensors supplement measure-ment of additional parameters.

Technical Specifications

CHRYSSAFIDIS

MAG **X**2

Optional power supply modules

All power supply modules have an automatic electronic fuse.
Max. 15 VA

90-250 VAC	90-250 VAC 50/60HZ
24 VDC	24 VDC ±5% (22.8-25.2 VDC)
12 VDC	12 VDC ±5% (11.4-12.6 VDC)

90-250 VAC POWER SUPPLY

90-250VAC
50-60Hz
0,45 A max

L - live
N - neutral
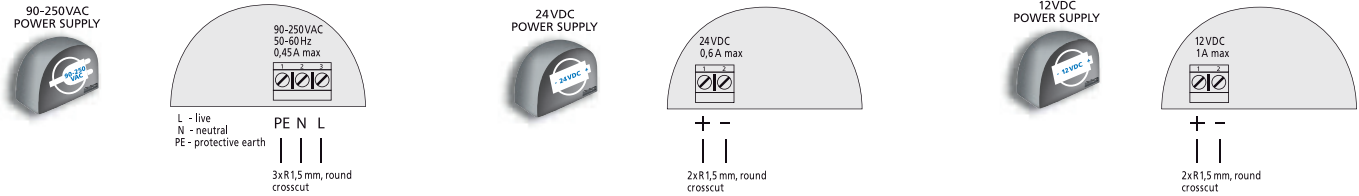PE - protective earth

PE N L

3 x R 1,5 mm, round crosscut

24 VDC POWER SUPPLY

24 VDC
0,6 A max

+ −

2 x R 1,5 mm, round crosscut

12 VDC POWER SUPPLY

12 VDC
1 A max

+ −

2 x R 1,5 mm, round crosscut

Sensor to transmitter connection cable

Transmitter   Sensor

Yellow — B
Green — A
Brown — 24V
White — GND

Optional analogue output modules

4-20 mA CURRENT LOOP

24 V   RL
EXT_UCC   up to 500R   IO
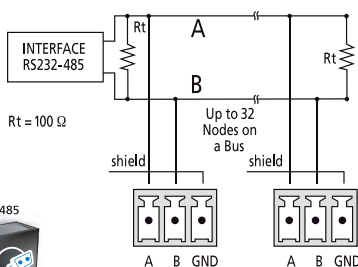A   V+
+   −

− A +
RL   IO
up to 500R V-
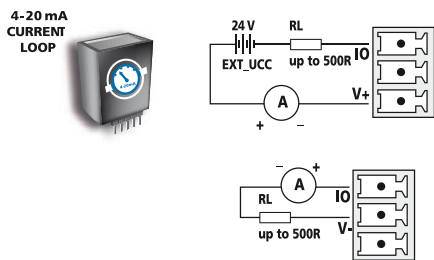
Current Loop output module	4-20 mA, with programmable flowrate and function
Pulse output module	4 output relays with programmable flowrate and function (max. 100 VDC/0.5A), Input signal for batching purposes (5-14V), Frequency output 2 – 1000 Hz with adjustable duty cycle
Pulse 230	2 output relays and 2 open collector outputs, max relay voltage (RE2, RE3) 250VAC/220VDC at 120VA/60W, output frequency 2-1000Hz, max input voltage (batching) +5-14V DC

PULSE

VDC	R1
5V	1k8
12V	3k3
24V	6k8

Frequency

External power supply
External resistor R

OP-E OP-C
GND   OUT   R   +5 - 24 VDC

RE1 RE1   RE2 RE2   RE3 RE3   RE4 RE4   +5 -14VDC
                                          IN   GND

Open collector
+5 - 24V DC   OUT
GND   R   Directly on the module
RE1 RE1   RE2 RE2

Open collector
OUT   +5 - 24V DC
Directly on the module   R   GND
RE3 RE3   RE4 RE4   Batching
                     +5 - 14 V DC
                     IN   GND

PULSE 230

VDC	R1
5V	1k8
12V	3k3
24V	6k8

Frequency

External power supply
External resistor R

OP-E OP-C
GND   OUT   R   +5 - 24 VDC

Relay output
RE2
RE3

Optional digital outputs/communication modules

Only one of the following modules can be used/installed at the same time

RS232	Including RS232 cable
RS485	Terminators may be needed
USB	Including USB cable
BLUETOOTH	Outside up to 200 m / Inside up to 50 m
TCP/IP	TCP/IP internet communication, amplifiers may be needed
GPRS	GSM850, GSM900, DCS1800, PCS1900
GSM-SMS	GSM850, GSM900, DCS1800, PCS1900
Wi-Fi	Up to 200 m

INTERFACE
RS232-485
Rt   A
          B   Rt

Rt = 100 Ω

Up to 32
Nodes on
a Bus

shield   shield

RS485

A B GND   A B GND

WI-FI   USB   RS232   GPRS   TCP/IP   BLUETOOTH

MODBUS

Modbus RTU can be used with all communication modules, except GSM - SMS - which has its own system using sms messages.

CHRYSSAFIDIS

MAG X2

Transmitter specifications MAGX2

IP67 Transmitter

IP68 Transmitter

Measurable media	Conductive fluids
Min. media electrical conductivity	≥5μS/cm or ≥20μS/cm for demineralized water
Flow range	0.1 to 10 m/s
Displayed values	Actual flow (m³/h l/s, l/m, US.gal/min, UK.gal/min), volume (m³, l, US.gal, UK.gal), positive, negative, total volume and auxiliary (clearable) volume, sensor temperature
Accuracy	±0.2% (0.5 - 10 m/s) of actual value
Power supply options	90-250 VAC 50/60 Hz or 24 VDC or 12 VDC
Power consumption	Max. 15VA
Communication protocol	Modbus RTU can be used with all the communication modules i.e. RS232, RS485, USB, BLUETOOTH, TCP, Wi-Fi
Flow direction	Bi-directional measurement
Ambient temperature	- 20ºC to 60ºC (-4ºF to 140ºF)
Display	LCD 128 x 64 px graphical, contrast setup
Controls	6 touch buttons + communication modules (IP67 Transmitter); 6 optical buttons + communication modules (IP68 Transmitter)
Low flow cut-off	OFF, 0.5%, 1%, 2%, 5%, 10% of Flow Qn
Adjustable filter constant	1 -120 samples; default value is 15 samples
Max. electronics weight (including housing)	2kg
Housing material	Aluminium (powder coated)
Housing dimensions	Ø 134 - 132 mm
Cable terminal	3+1xM16x1.5 IP68 cable glands
Electronics protection	Standard IP67 / IP68 optionable
Other features	Auto-diagnostics Multi-language options (English, Spanish, Russian or Ukrainian, other languages possible) Indicative temperature measurement up to 150ºC Test of excitation coils Empty pipe detection Zero flow adjustment Flow simulator
Excitation frequency	3.125 Hz or 6.25 Hz
Real time	Clock function for data-logging
Analogue outputs	Optionals: Current 4-20 mA, Pulse, Pulse 230
Digital outputs (communication)	Optionals: USB, RS232, RS485, BLUETOOTH, GPRS, TCP/IP, GSM-SMS, Wi-Fi
Data logger	Micro SD card
Certification	EMC, ES, PED, IP68, WRAS, OIML R49

Sensor specifications MAGX2

Connection types	DIN, ANSI, JIS flanges. Other types on request
Flange	Steel 1.0036 or higher, Dimensions according to DIN EN 1092-1, ASME B 16.5, JIS B 2239
Nominal size	10-1000 mm (1/2" - 40")
Maximum nominal pressure	PN 40/300 psi
Max. media temperature	70°C (158°F) for Hard Rubber liner, 130°C (266°F) for PTFE liner in remote version
Ambient temperature	- 20 to 60°C (-4 to 140°F)
Sensor protection	Remote IP68 (NEMA 6)
Liner	Hard Rubber, PTFE other material on request, WRAS approved material available for sizes up to DN600
Electrodes	CrNi (Stainless) steel 1.4571 / 316Ti, other materials on request
Measuring tube	Stainless steel 1.4301 dimensions according to EN 10027-2
Outer casing	Carbon steel (1.0036) as standard
External coating	Lacquered finish (anticorrosive)
Accessories options	Earthing rings for plastic and lined pipes
Coils resistance	80 / 100 Ω
Other features	Earthing through 3rd and 4th electrode Automatic electrode cleaning

WRAS approved product available for DN25, DN50 and DN80

Technical Drawing Data-Sheet IP67 Transmitter ___ MAG X2

DIN

DN	ØD	D1	CxØd	L	H-compact	H-remote
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
10	90	60	4x14	200	275	180
15	95	65	4x14	200	280	185
20	105	75	4x14	200	288	193
25	115	85	4x14	200	293	198
32	140	100	4x18	200	312	217
40	150	110	4x18	200	320	225
50	165	125	4x18	200	334	239
65	185	145	8x18	200	354	259
80	200	160	8x18	200	373	278
100	220	180	8x18	250	393	298
125	250	210	8x18	250	419	324
150	285	240	8x22	300	458	363
200	340	295	12x22	350	514	419
250	405	355	12x26	400	584	489
300	460	410	12x26	500	633	538
350	520	470	16x26	500	701	606
400	580	525	16x30	600	754	659
450	640	585	20x30	600	797	702
500	715	650	20x33	600	865	770
600	840	770	20x36	600	982	887

ANSI

DN	ØD	D1	CxØd	L	H-compact	H-remote
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
1/2"	88.9	60.5	4x16	200	277	182
3/4"	98.6	69.9	4x20	200	284	189
1"	108	79.2	4x20	200	290	195
1.1/4"	117.3	88.9	4x20	200	300	205
1.1/2"	127	98.6	4x23	200	309	214
2"	152.4	120.7	8x20	200	328	233
2.1/2"	177.8	139.7	4x20	200	350	255
3"	190.5	152.4	4x20	200	368	273
4"	228.6	190.5	8x20	250	397	302
5"	254	215.9	8x23	250	421	326
6"	279.4	241.3	8x23	300	455	360
8"	342.9	298.5	8x23	350	515	420
10"	406.4	362	12x26	400	584	489
12"	482.6	431.8	12x26	500	644	549
14"	533.4	476.3	12x29	500	708	613
16"	596.9	539.8	16x29	600	762	667
18"	635	577.9	16x32	600	795	700
20"	698.5	635	20x32	600	856	761
24"	812.8	749.3	20x35	600	968	873

Compact version:

Remote version:

Max. electronics weight (including housing)	2 kg
Housing material	Aluminium + powder coating
Housing dimensions	Ø 134 - 132 mm
Cable terminal	3+1xM16x1.5 IP68 cable glands
Electronics protection	IP67 / NEMA 5

Tolerance of built-in length:
DN 10 – DN 150   L ± 5 mm
DN 200 – DN 1000   L ± 10 mm

Standard pressure:
DN 10 – DN 50   PN 40 / 150 lbs.
DN 65 – DN 150   PN 16 / 150 lbs.

CHRYSSAFIDIS S.A./ ATHENS: 3 AGRINIOU STR, TAVROS - (+30) 210 4836315-20 / THESSALONIKI: DA12A STR, OT32, BIPE SINDOU - (+30) 2310 754681-4 / www.chryssafidis.com / sales@chryssafidis.gr

9

Technical Drawing Data-Sheet IP68 Transmitter — MAG X2

DIN

DN	ØD	D1	CxØd	L	H-compact	H-remote
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
10	90	60	4x14	200	275	180
15	95	65	4x14	200	280	185
20	105	75	4x14	200	288	193
25	115	85	4x14	200	293	198
32	140	100	4x18	200	312	217
40	150	110	4x18	200	320	225
50	165	125	4x18	200	334	239
65	185	145	8x18	200	354	259
80	200	160	8x18	200	373	278
100	220	180	8x18	250	393	298
125	250	210	8x18	250	419	324
150	285	240	8x22	300	458	363
200	340	295	12x22	350	514	419
250	405	355	12x26	400	584	489
300	460	410	12x26	500	633	538
350	520	470	16x26	500	701	606
400	580	525	16x30	600	754	659
450	640	585	20x30	600	797	702
500	715	650	20x33	600	865	770
600	840	770	20x36	600	982	887

ANSI

DN	ØD	D1	CxØd	L	H-compact	H-remote
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
1/2"	88.9	60.5	4x16	200	277	182
3/4"	98.6	69.9	4x20	200	284	189
1"	108	79.2	4x20	200	290	195
1.1/4"	117.3	88.9	4x20	200	300	205
1.1/2"	127	98.6	4x23	200	309	214
2"	152.4	120.7	8x20	200	328	233
2.1/2"	177.8	139.7	4x20	200	350	255
3"	190.5	152.4	4x20	200	368	273
4"	228.6	190.5	8x20	250	397	302
5"	254	215.9	8x23	250	421	326
6"	279.4	241.3	8x23	300	455	360
8"	342.9	298.5	8x23	350	515	420
10"	406.4	362	12x26	400	584	489
12"	482.6	431.8	12x26	500	644	549
14"	533.4	476.3	12x29	500	708	613
16"	596.9	539.8	16x29	600	762	667
18"	635	577.9	16x32	600	795	700
20"	698.5	635	20x32	600	856	761
24"	812.8	749.3	20x35	600	968	873

Compact version:

Remote version:

Max. electronics weight (including housing)	2 kg
Housing material	Aluminium + powder coating
Housing dimensions	134 - 132 mm
Cable terminal	3+1xM16x1.5 IP68 cable glands
Electronics protection	IP68 / NEMA 6

Tolerance of built-in length:
DN 10 – DN 150   L ± 5 mm
DN 200 – DN 1000   L ± 10 mm

Standard pressure:
DN 10 – DN 50   PN 40 / 150 lbs.
DN 65 – DN 150   PN 16 / 150 lbs.

CHRYSSAFIDIS S.A./ ATHENS: 3 AGRINIOU STR, TAVROS - (+30) 210 4836315-20 / THESSALONIKI: DA12A STR, OT32, BIPE SINDOU - (+30) 2310 754681-4 / www.chryssafidis.com / sales@chryssafidis.gr

Flow velocity, Flow rate, Quality management system

Flow velocity
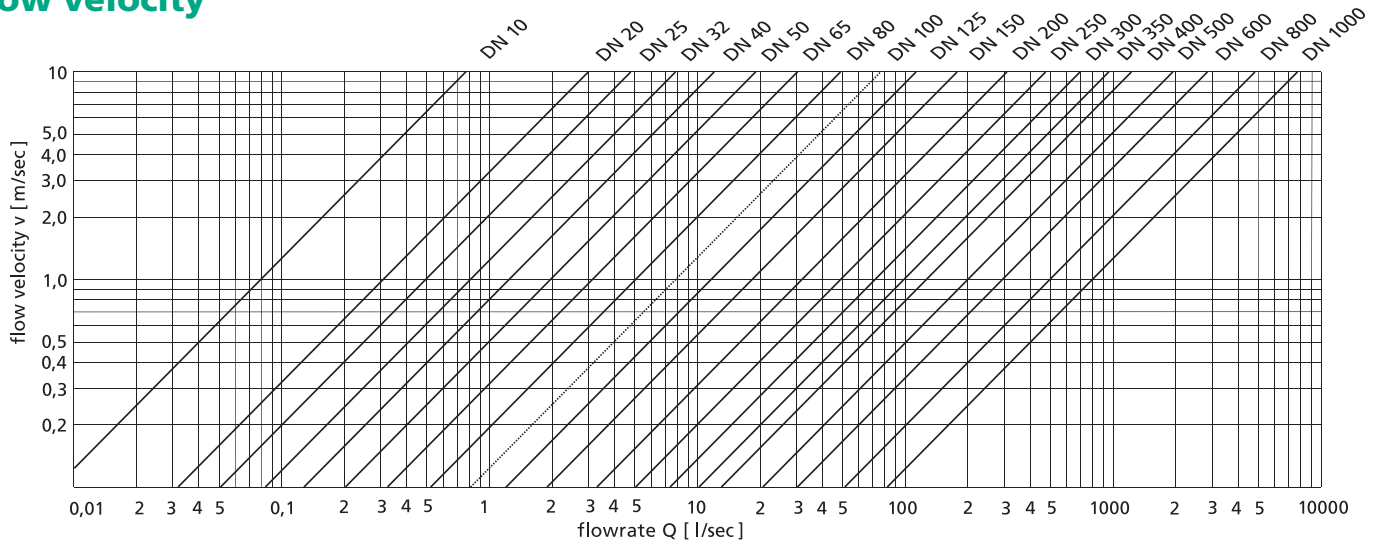
Flow rate

Flow rates [l/s]

DN	Q 5%	QN	QN 50%	QN 100%	Q MAX
10	0.04	0.2	0.39	0.79	0.98
15	0.09	0.5	0.88	1.77	2.21
20	0.16	0.9	1.57	3.14	3.93
25	0.25	1.4	2.45	4.91	6.14
32	0.4	2.2	4.02	8.04	10.05
40	0.6	4	6.3	12.6	15.7
50	1	6	9.8	19.6	24.5
65	1.7	9	16.6	33.2	41.5
80	2.5	14	25.1	50.3	62.8
100	3.9	20	39.3	78.5	98.2
125	6	30	61	123	153
150	9	50	88	177	221
200	16	100	157	314	393
250	25	150	245	491	614
300	35	200	353	707	884
350	48	300	481	962	1203
400	63	400	628	1257	1571
500	98	600	982	1963	2454
600	141	800	1414	2827	3534
700	192	1000	1924	3848	4811
800	251	1200	2513	5027	6283
900	318	1500	3181	6362	7952
1000	393	2000	3927	7854	9817

Flow rates [m³/h]

QN 5%	QN	QN 50%	QN 100%	Q MAX
0.14	0.8	1.41	2.83	3.53
0.32	2	3.18	6.36	7.95
0.57	3.2	5.65	11.31	14.14
0.88	5	8.84	17.67	22.09
1.5	8	14.5	29	36.2
2.3	13	22.6	45.2	56.6
3.5	20	35.3	70.7	88.4
6	35	59.7	119.5	149.3
9	50	90.5	181	226.2
14	80	141	283	353
22	150	221	442	552
32	200	318	636	795
57	300	565	1131	1414
88	500	884	1767	2209
127	800	1272	2545	3181
173	1000	1732	3464	4330
226	1300	2262	4524	5655
353	2000	3534	7069	8836
509	3000	5089	10179	12723
693	4000	6927	13854	17318
905	5000	9048	18096	22620
1145	6000	11451	22902	28630
1414	8000	14137	28274	35340

Q5% recommended minimum flowrate / QN recommended nominal flowrate (expected working flowrate)
Q50% recommended maximum flowrate (maximum flowrate for industrial use) / Q100% maximum applicable flowrate (maximum flowrate with guaranteed accuracy)
QMAX maximum applicable overload (Q125%) (flowmeter is still measuring)

Quality management system & Traceability

Arkon quality management system is certified according to standard ISO 9001:2008.
All main processes of manufacturing, development, sale and services are certified and audited yearly by Bureau Veritas Certification.

All manufactured flowmeters are carefully tested according to internal standards and calibrated in independent laboratories specialized in flow rate and flow volume calibration of liquids.

Arkon main standards are traceable directly to Czech national standards in the Czech Metrology Institute (CMI). CMI is the Czech national metrology body and is traceable to international standards. CMI laboratories are accredited by Czech institute for accreditation, a member of European co-operation for accreditation.

# Recommended position for sensor installation

Sensor installation requirements

Proper installation is extremely important in order for your flowmeter to work correctly. There are minimum sensor installation requirements that need to be respected at all times. Please note that Arkon cannot warranty any installation which does not comply with these requirements:

Horizontal standard mounting

The sensor tube must always remain full. The best way to achieve this is to locate the sensor in a low section of pipe, see the following picture.

It is mandatory to install the sensor in a section of straight pipe with at least 5 times the pipe diameter before sensor and 3 times after sensor.
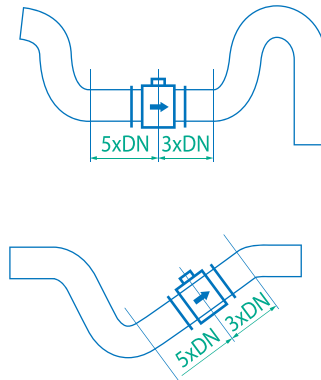
Pipe reducers

If the pipe diameter is not the same as the diameter of sensor, then pipe reducers can be used. So as not to lose accuracy of the measurement, the slope of reducers should not exceed 8°.
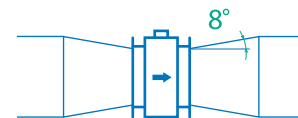
Vertical mounting

When the sensor is mounted on a vertical section of pipe, the flow direction must be upwards. In the case of a downward flow direction, air bubbles can collect in the sensor and the measurement could be unstable and inaccurate.
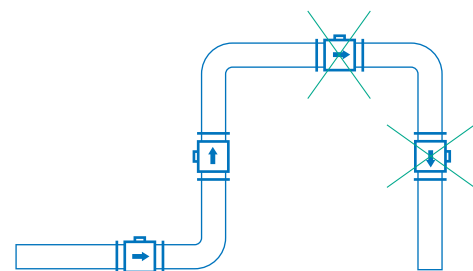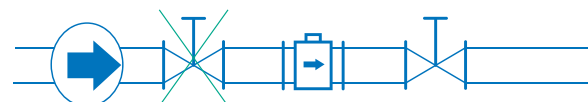
Pumps

Never install the sensor on the suction side of a pump or on a section of pipe where a vacuum is possible.
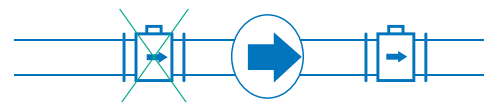
Valves

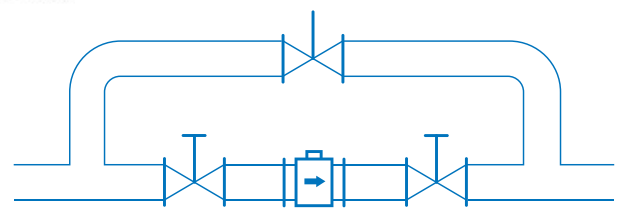Suitable location of a shut off valve is downstream of a sensor.

CHRYSSAFIDIS

Removal during maintenance

If the application requires removal of the sensor for periodic maintenance, it is recommended to install a bypass section as the drawing below.

Earthing

All flowmeters must be earthed. Maximum resistance of the sensor to earth is <1 ohm. All the components in the loop, including flowmeter, pumps (especially submersible) valves, pipework, tanks and medium, should all be at the same earth potential. Problems can occur when different potentials are present which can happen, especially with submersible pumps. On applications with metal pipes and tanks it is enough to earth the flowmeter to the pipe's flanges. On applications where pipes and tanks are manufactured from plastic it is necessary that earthing rings are also installed to ensure the flowmeter works correctly.

Plastic → ← Metal
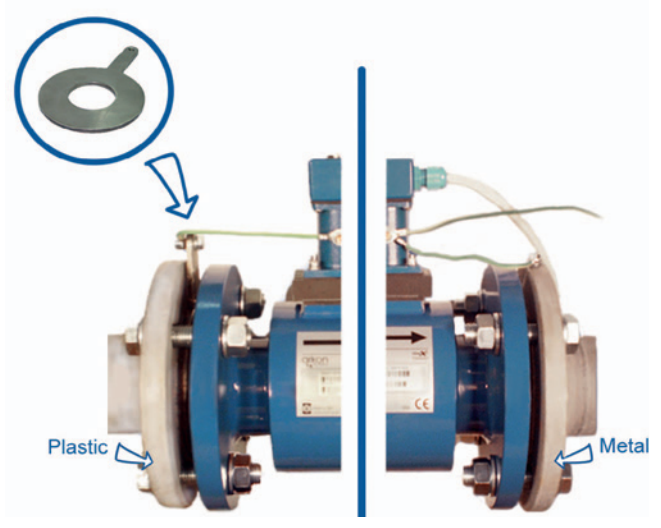
Remote mounting system

| Wall | DIN Rail | Panel |

"Meeting your specific requirements"

Remote connection cable	UNITRONIC LiYCY (TP) 0035 830, 2x2x0.5 mm for MAGX2
	UNITRONIC Li2YCY (TP) 0031 325, 2x2x0.34 mm for MAGB1
Wall mounting	
DIN Rail mounting	
Panel mounting	Max. Panel thickness 5 mm
Sensor junction box	30 x 40 x 40 mm

Certification

MAGX2	EMC and ES certified	OIML R49 for MAGX2 and MAGB1
MAGB1	PED 92/23 EC	IP68 for MAGX2 and MAGB1
MAGS1	CE certified	GOST certification
Agrimag / AgrimagP / AgrimagP2		WRAS certification for MAGX2 DN25, DN50 and DN80
		Company is ISO 9001: 2008 certified

ISO 9001 BUREAU VERITAS Certification — 1828

WRAS APPROVED PRODUCT

CE

CHRYSSAFIDIS S.A./ ATHENS: 3 AGRINIOU STR, TAVROS - (+30) 210 4836315-20 / THESSALONIKI: DA12A STR, OT32, BIPE SINDOU - (+30) 2310 754681-4 / www.chryssafidis.com / sales@chryssafidis.gr

25

MAG X2 — ordering specification codes

Model	1	2	3	4	5	6	7	Description
MAGX2 / MAGX2 IP68 (Ordering code)								
	T							MAGX2 main board, display, 6 buttons control unit
								Power supply module
		230						Power supply module 90-250VAC - Version 4.
		24						Power supply module 24VDC - Version 4.
		12						Power supply module 12VDC - Version 4.
			CM					Sensor to transmitter communication module - Version 8
								Remote mounting kit
				N				None
				W				WALL mounting kit (including 6 m cable)
				P				PANEL mounting kit (including 6 m cable)
				D				DIN-Rail mounting kit (including 6 m cable)
								Output 1
					N			None
					C			4-20 mA current output signal module
					EP			External pressure sensor**
								Output 2
						N		None
						P		Pulse output module
						P2		Pulse 230
						ET		External temperature sensor**
								Communication
							N	None
							232	RS232 communication module, including 1.8 m cable
							USB	USB communication module, including 1.8 m cable
							BTO	Bluetooth communication module
							GPR	GPRS communication module
							485	RS485 communication module, distance up to 1 km
							TCP	TCP/IP communication module, amplifiers might be necessary
							SMS	GSM-SMS communication module
							WIFI	Wi-Fi communication module
Example MAGX2	T	230	CM	N	C	N	USB	* Please note you need another communication module for setup of the GPRS module ** Input

Model	1	2	3	4	5	Description
MAGX2 Sensor (Ordering code)						
						Connection
	D					DIN
	A					ANSI
	DS					DIN Flange St. St.
	DSS					DIN St. St. body
	AS					ANSI Flange St. St.
	ASS					ANSI St. St. body
	S					DIN 11851
	SSS					DIN 11851 St. St. body
	J					JIS
	E					Table E
	TD					Table D
	T					Tri-clamp
	W					Wafer
						Size
		10 / 3/8 — 200 / 8				10 mm / 3/8" — 200 mm / 8"
		15 / 1/2 — 250 / 10				15 mm / 1/2" — 250 mm / 10"
		20 / 3/4 — 300 / 12				20 mm / 3/4" — 300 mm / 12"
		25 / 1 — 350 / 14				25 mm / 1" — 350 mm / 14"
		32 / 1.1/4 — 400 / 16				32 mm / 1.1/4" — 400 mm / 16"
		40 / 1.1/2 — 450 / 18				40 mm / 1.1/2" — 450 mm / 18"
		50 / 2 — 500 / 20				50 mm /2" — 500 mm / 20"
		65 / 2.1/2 — 600 / 24				65 mm / 2.1/2" — 600 mm / 24"
		80 / 3 — 700 / 28				80 mm / 3" — 700 mm / 28"
		100 / 4 — 800 / 32				100 mm / 4" — 800 mm / 32"
		125 / 5 — 900 / 36				125 mm / 5" — 900 mm / 36"
		150 / 6 — 1000 / 40				150 mm / 6" — 1000 mm / 40"
						Liner
			HR			HARD RUBBER
			PT			PTFE
			SR			SOFT RUBBER
			NR			HYGIENIC RUBBER
			CT			E-CTFE
						Pressure
				150		150 psi
				300		300 psi
				10		PN10
				16		PN16
				25		PN25
				40		PN40
						Electrodes
					SS	Stainless Steel
					HA	Hastelloy C
					TA	Tantalum
					TI	Titanium
					PL	Platinum
Example MAGX2 Sensor	D	100	HR	16	SS	

CHRYSSAFIDIS

Please note that on official orders and quotes each item is listed separately with individual price.